



Oral and written examination United

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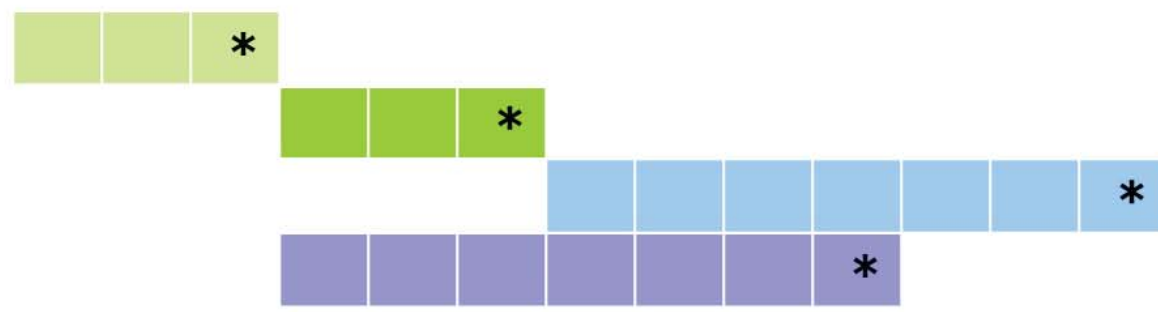
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A term is 18 weeks (13 + 2 + 3)



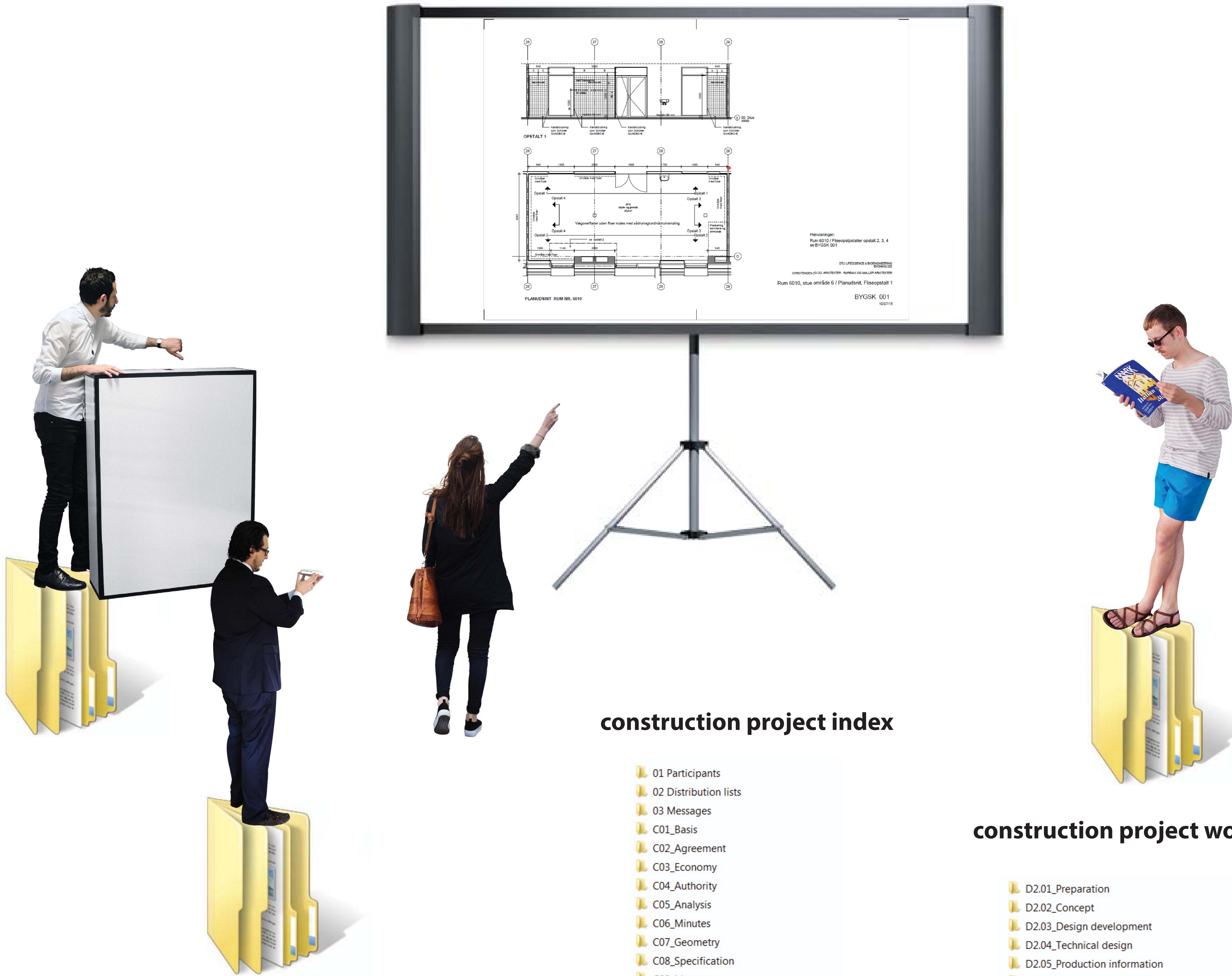
Project work – the theme get more and more intensified during the term



Professional modules are an extension of each other or partially overlapping. All are relevant for the term theme and are supposed to be used in that context.



Scientific elements that are nested with engineer disciplines and methods



construction project index

- 01 Participants
- 02 Distribution lists
- 03 Messages
- C01_Basis
- C02_Agreement
- C03_Economy
- C04_Authority
- C05_Analysis
- C06_Minutes
- C07_Geometry
- C08_Specification
- C09_Message
- C10_Quality management
- C11_Information
- C12_Time- and resource management
- D1_Basis
- D2_Hand over

construction project work stage

- D2.01_Preparation
- D2.02_Concept
- D2.03_Design development
- D2.04_Technical design
- D2.05_Production information
- D2.06_Tender documentation
- D2.07_Tender action
- D2.08_Mobilisation
- D2.09_Construction to practical completion
- D2.10_ASSIGNMENTS
- D2.11_EXAM

DIGITAL PRESENTATION

Oral and written examination United

Thomas Winther, associate professor, MA Architecture, CEPH, DGNB

Part of the project based teaching method, the DTU civil engineering 'Umbrella Method', is an evaluation that at the same time actively makes the student's work during the semester a dynamic part of the students final presentation as well as it forms the basis of the examiner's evaluation.

Alignment is a key issue when consolidating and evaluating the outcome of any course. The "Umbrella" model is a project organized approach to teaching, subsequently the structure and the evaluation of the course needs to take this into account.

A contemporary building and construction project today is in its core a digital project involving multiple parties and multiple disciplines. In public contracts so is the hand over, and this is also the nature of our student's projects which are mostly based on group work.

With this in mind we have developed a method to make a digital evaluation of the digital project in order to ensure profound alignment of the course and course aims. The evaluation is to some extend based on Danish digital design standards which allows us to ensure a project structure with a broad utility, where students, teachers and censors from the corporate environment, national and

international, can participate on equal cross disciplinary terms.

The basis of the evaluation is a Power Point presentation, but in the context of digital presentation, the Power Point is only the *frame* for the student's presentation. Core elements of the presentation link to the underlying standardized project archive, which in a more developed version of the method is accessible not only for the teachers, but live linked to external censors. The archive is in the form of a professional project archive, and the archive contains the student's entire project, including all source files, documents and calculations.

In reality it is the simulation of a real construction project except two additional folders containing course assignments and EXAM.

In Denmark the standardized digital archive also contains and specifies the various work stages of the project, meaning, that progression is inherent when using this method.

As before mentioned 'alignment' is important when designing the course. When aligning course elements the product is sometimes a fragmentation of the project and a loss of the projects entirety.

The construction project contains numerous elements, and in order to ensure coherence, the Umbrella is introduced *with* the project archive. In this fashion an accumulation of the project information is ensured from start up.

In short the students is at the same time liberated in his or her collection and presentation of core elements of the projects, and the student is also supported with access to the entirety of the semesters production *during* the examination.

Rather than dwelling on the theoretical aspect of a solution sometimes losing the relation to its original intend, the student can at all times exemplify and relate to core documents of the construction project. Likewise the examining teacher can use the source project when asking in on the project and the students understanding.

Time is of the essence when evaluating students, and it is our experience that this method combines the written and oral presentation in a way that at the same time saves us valuable time and also enables the student to take on a professional dialogue within a professional construction project even when newly graduated.